

REMARKS

Upon entry of the present amendment, claim 14 will have been amended to clarify Applicants invention and to recite the same in terms that are even more fully and clearly definite and accurate.

In view of the herein contained amendments and remarks, Applicants respectfully request reconsideration and withdrawal of each of the outstanding rejections set forth in the above-mentioned Official Action together with an indication of the allowability of claim 14 pending herein. Such action is respectfully requested and is now believed to be appropriate and proper.

In the outstanding Official Action, the Examiner set forth guidelines that illustrate the preferred layout of the specification of an application. The Examiner suggested these guidelines for Applicants use. Applicants note the Examiner's suggestions with appreciation and will use the guidelines in the future.

In the outstanding Official Action, the Examiner rejected claim 14 under 35 U.S.C. § 112, second paragraph as being indefinite. The Examiner asserted that the claim fails to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. In particular, the Examiner pointed out that it was not clear whether the recited "providing a second metal electrode layer" is the same or is separate with respect to the recited "filling a conduction filling material into the trench".

In response, Applicants submit that two separate recitations are set forth in Applicants claim. In particular, and as should be apparent from the claim language, the "filling" relates to the first metal electrode layer that is formed on the dielectric layer inside the trench while the "providing" relates to second metal electrode layer that is in the upper region of the trench. To further clarify this clear meaning of the claim language, Applicants have amended claim 14 to indicate that the provision of the second metal electrode layer is "by etching back said conducting filling material". It is respectfully submitted that as amended herein, there can no longer be any doubt whether one or two distinct limitations are being claimed. Rather, it is quite clear that two recitations are being claimed herein.

Applicants submit that the amendment of claim 14 does not constitute prohibited new matter. Rather, support for Applicants recitation is found throughout Applicants specification. In this regard, the Examiner's attention is respectfully directed to page 10, line 31 through page 11, line 2 wherein Applicants disclose "in a subsequent process step... is etched back to the upper side of the buried plate 60". Similarly, the disclosure at page 11, lines 18-20, page 15, lines 9-11 and page 18, lines 8-10, make clear that two separate limitations are recited in the "providing" and in the "filling" recited in claim 14.

Accordingly, Applicants respectfully request reconsideration and withdrawal of the outstanding rejection of claim 14 as indefinite under 35 U.S.C. § 112, second paragraph.

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In the outstanding Official Action, the Examiner further rejected claim 14 under 35 U.S.C. § 103(a) as being unpatentable over TSAI et al. (U.S. Patent No. 6,117,726) in view of KITA (U.S. Patent No. 5,618,745). The Examiner indicated that both of these references have been newly cited. Applicants respectfully traverse the above rejection and submit that it is inappropriate. In particular, neither TSAI et al. nor KITA nor the combination thereof, teach, disclose nor render obvious the combination recited in claim 14.

In particular, the Examiner relies on TSAI et al. for disclosing a method for producing a trench capacitor for use in a semi-conductor memory cell. The Examiner admits that TSAI et al. does not disclose that the dielectric layer is applied by one of the "ALD, ALCD and CVD method" but that these methods are shown in KITA.

As noted above, Applicants respectfully traverse the above rejection and submit that the combination recited in claim 14 is not disclosed by any proper combination of these two references.

As noted above with respect to the rejection under 35 U.S.C. § 112, according to the teachings of the present invention as embodied in claim 14, the method includes, inter alia, filling a conducting material into the trench as well as etching back the conducting filing material such that a second metal electrode layer is provided in the upper region of the trench. It is respectfully submitted that at least these recitations of claim 14 are not disclosed in the references cited by the Examiner.

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In particular, TSAI et al. only discloses a step of filling the entire trench 343 to form a third conductive layer 372. However, TSAI et al. does not disclose etching back the conductive layer in the trench 343. In this regard, the Examiner's attention is respectfully directed to Fig. 3K of TSAI et al. and to the description associated therewith. In particular, at column 4, lines 9-13, TSAI et al. discloses that the trench is filled with a third conductive layer 372 but the trench is not etched back after being filled with the first conductive layer as recited in Applicants claim 14. Accordingly, it is respectfully submitted that TSAI et al. does not disclose the combination of features recited in Applicants claim 14.

Additionally, it is quite clear that the secondary reference of KITA contains no disclosure that would render obvious to one of ordinary skill in the art the providing of an additional step of etching back the conducting filling material to provide a second metal electrode layer in an upper region of the trench. The Examiner has not even asserted that the KITA document discloses this recited feature and it is respectfully submitted that it does not disclose this feature. Accordingly, Applicants respectfully traverse the pending rejection of claim 14, and request the reconsideration thereof, together with an indication of the allowability of the claim. Such action is respectfully requested and is now believed to be appropriate and proper.

Applicants note that the status of the present application is After Final Rejection and that once a final rejection has been issued, an Applicant does not have a right to amend the

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claims in an application. Nevertheless, in the present application, it is respectfully submitted that entry of the present amendment is appropriate and proper in accordance with the provisions of 37 C.F.R. § 1.116. In particular, Applicants claim 14 has been amended to eliminate the basis for the Examiner's assertion that the language of claim 14 is not clear, definite and accurate. Accordingly, the amendment of claim 14 does not raise any new issues requiring further consideration or search and also does not raise the question of new matter. Rather, the amendment of claim 14 places the application in clear condition for allowance and an action to such effect is respectfully requested in due course.

Accordingly, Applicants respectfully request entry of the present amendment, reconsideration of each of the outstanding rejections and an indication of the allowability of claim 14, in due course.

SUMMARY AND CONCLUSION

Applicants have made a sincere effort to place the present application in condition for allowance and believe that they have now done so. Applicants have amended claim 14 to overcome the Examiner's rejection thereof as indefinite. Applicants have further discussed the disclosure of the references relied upon by the Examiner and have pointed out the significant and substantial shortcomings thereof with respect to the claimed invention. Additionally, Applicants have reviewed the claim limitations and have shown that the limitations of Applicants claim 14 are not disclosed by any of the references or by the combination of references cited by the Examiner. Accordingly, Applicants have provided a clear evidentiary basis supporting the patentability of all the claims in the present application and respectfully request an indication to such effect in due course.

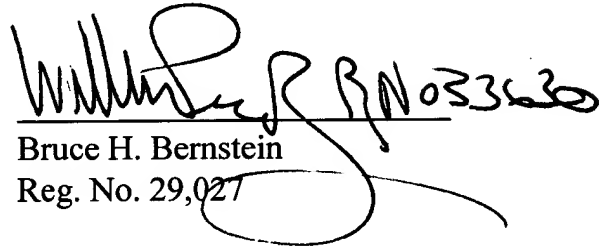
Applicants have additionally addressed and provided a basis for entry of the present amendment although the status of the present application is After Final Rejection. Accordingly, entry of the present amendment, reconsideration of the outstanding rejection and an indication of the allowability of claim 14 is respectfully requested in due course.

Any amendments to existing claims which have been made by the present amendment, and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

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Should there be any questions concerning this application, the Examiner is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,
Harald SEIDL et al.

A handwritten signature in black ink, appearing to read "William Bernstein", is written over a horizontal line. To the right of the signature, the text "RN 033630" is handwritten. Below the signature line, the printed name "Bruce H. Bernstein" and "Reg. No. 29,027" are visible.

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